CURRICULUM VITAE

Daniel K. Schwartz
Phone: (303) 735-0240
email: daniel.schwartz@colorado.edu

Department of Chemical & Biological Engineering
University of Colorado Boulder (CU-Boulder)
Boulder, CO 80309-0424

POSITIONS HELD

7/12 –	Chair, Department of Chemical & Biological Engineering, CU-Boulder
7/12 –	Alfred and Betty Look Professor of Engineering, CU-Boulder
4/04 –	Senior Editor, *Langmuir*
9/04 – 6/12	Professor, Dept. of Chemical & Biological Engineering, CU-Boulder
1/01 – 8/04	Associate Professor, Dept. of Chemical & Biological Engineering, CU-Boulder
7/98 – 12/00	Associate Professor, Department of Chemistry, Tulane University
7/94 – 6/98	Assistant Professor, Department of Chemistry, Tulane University
9/92 – 7/94	Postdoctoral Associate, Dept. of Chemistry and Biochemistry University of California, Los Angeles with Charles M. Knobler
4/91 – 8/92	Postdoctoral Associate, Dept. of Chemical and Nuclear Engineering University of California, Santa Barbara with Joseph A. Zasadzinski

EDUCATION

Ph. D. in Physics, Harvard University (Advisor: Professor Peter S. Pershan)	6/91
A.B. *summa cum laude* in Chemistry and Physics, Harvard University	6/84

SELECTED HONORS AND AWARDS

2014	Elected Fellow of the American Chemical Society
2011	Elected Fellow of the American Physical Society
2011	Graduate Teaching Award, CU-Boulder Chemical & Biological Engineering
2010	Faculty Research Award, CU-Boulder College of Engineering
2008	Boulder Faculty Assembly Award for Excellence in Research
2006	CU-LEAD Alliance Faculty Appreciation Award
1999	Camille Dreyfus Teacher-Scholar Award
1998	NSF/CAREER Award
1997-9	Mortarboard Honor Society Salute for Excellence in Teaching (3 times)
1994	Camille & Henry Dreyfus Foundation New Faculty Award
1985	Stone and Webster Fellowship, Harvard University
1981	Detur Prize (award for top freshmen), Harvard University

SYNERGISTIC ACTIVITIES

Senior Editor (2004–present), *Langmuir*
Chair-line Officer (2014-2017), ACS Colloid & Surface Chemistry Division
Founding Director (2003–2012), NSF REU Site Program in Functional Materials
Founding Director (1998–2000), Tulane Science Scholars Program
Curriculum Developer, *Creative Technology*, a course that has introduced alternative energy, biotech, and nanoscience concepts to more than 7000 non-science undergraduates.

PUBLICATIONS

1. J.F. Lynch, D.K. Schwartz, and K. Sivaprasad, *J. Acoust. Soc. Am.* **78**, 575 (1985)
"On the use of Focused Horizontal Arrays as Mode Separation and Source Location Devices in Ocean Acoustics"

2. D.K. Schwartz, A. Braslau, B. Ocko, and P.S. Pershan, *Phys. Rev. A* **38**, 5817 (1988)
"X-ray Reflectivity Studies of a Microemulsion Surface"

3. M.L. Schlossman, D.K. Schwartz, E.H. Kawamoto, G.J. Kellogg, P.S. Pershan, B.M. Ocko, M.W. Kim, and T.C. Chung, *Mat. Res. Soc. Symp. Proc.* **177**, 351 (1990)
"X-ray Studies of the Liquid/Vapor Interface: Water and Polymer and Fatty Acid Monolayers on Water"

4. D.K. Schwartz, M.L. Schlossman, E.H. Kawamoto, G.J. Kellogg, P.S. Pershan, and B.M. Ocko, *Phys. Rev. A* **41**, 5687 (1990)
"Thermal Diffuse X-ray Scattering Studies of the Water/Vapor Interface"

5. G. Swislow, D. Schwartz, B.M. Ocko, and P.S. Pershan, *Phys. Rev. A* **43**, 6815 (1991)
"X-ray Studies of the Surface and Bulk Structure of the Isotropic and Nematic Phase of a Lyotropic Liquid Crystal"

6. M.L. Schlossman, D.K. Schwartz, E.H. Kawamoto, G.J. Kellogg, P.S. Pershan, M.W. Kim, and T.C. Chung, *J. Phys. Chem.* **95**, 6628 (1991)
"X-ray Reflectivity of a Polymer Monolayer at the Water/Vapor Interface"

7. D.K. Schwartz, P.S. Pershan, E.H. Kawamoto, G.J. Kellogg, and S. Lee, *Phys. Rev. Lett.* **66**, 1599 (1991)
"Relaxation and the Reentrant Appearance of Phases in a Molecular Monolayer, M.L. Schlossman"

8. D.K. Schwartz, M.L. Schlossman, and P.S. Pershan, *J. Chem. Phys.*, **96**, 2356 (1992)
"Re-entrant Appearance of Phases in a Relaxed Langmuir Monolayer of Tetracosanoic Acid as Determined by X-ray Scattering"

9. J.T. Woodward, J.A.N. Zasadzinski, and D.K. Schwartz, *Phys. Rev. Lett.*, **68**, 2563 (1992)
"Alternative Method of Imaging Surface Topologies of Nonconducting Bulk Specimens" (comment)

10. D.K Schwartz, J. Garnaes, R. Viswanathan, and J.A.N. Zasadzinski, *Scanning*, **14**, II-3 (1992)
"Atomic Force Microscopy of the Molecular Lattice of Thin Langmuir-Blodgett Films"

11. R. Viswanathan, D.K. Schwartz, J. Garnaes, and J.A.N. Zasadzinski, *Langmuir*, **8**, 1603 (1992)
"Atomic Force Microscopy Imaging of Substrate and pH Effects on Langmuir-Blodgett Monolayers"

12. J. Garnaes, D.K. Schwartz, R. Viswanathan, and J.A.N. Zasadzinski, *Nature*, **357**, 54 (1992)
"Domain Boundaries and Buckling Superstructures in Langmuir-Blodgett Films"

13. D.K. Schwartz, J. Garnaes, R. Viswanathan, and J.A.N. Zasadzinski, *Science*, **257**, 508 (1992)
"Surface Order and Stability in Langmuir-Blodgett Films"

14. D.K. Schwartz, R. Viswanathan, and J.A.N. Zasadzinski, *J. Phys. Chem.*, **96**, 10444 (1992)
"Reorganization and Crystallite Formation in Langmuir-Blodgett Films"

15. D.K. Schwartz, S. Steinberg, J. Israelachvili, J.A.N. Zasadzinski, *Phys. Rev. Lett.*, **69**, 3354 (1992)
"Growth of a Self-Assembled Monolayer by Fractal Aggregation"

16. D.K. Schwartz, J. Garnaes, R. Viswanathan, S. Chiruvolu, and J.A.N. Zasadzinski, *Phys. Rev. E*, **47**, 452 (1993)
"Quantitative Lattice Measurement of Thin Langmuir-Blodgett Films by Atomic Force Microscopy"

17. D.K. Schwartz, R. Viswanathan, and J.A. Zasadzinski, *Phys. Rev. Lett.*, **70**, 1267 (1993)
"Commensurate Defect Superstructures in a Langmuir-Blodgett Film"

18. D.K. Schwartz, R. Viswanathan, and J.A.N. Zasadzinski, *Langmuir*, **9**, 1384 (1993)
"Coexisting Lattice Structures in a Langmuir-Blodgett Film"

19. J. Garnaes, D.K. Schwartz, R. Viswanathan, J.A.N. Zasadzinski, *J. Synth. Metals*, **57**, 3795 (1993)
"Nanoscale Defects in Langmuir-Blodgett Films Observed by Atomic Force Microscopy"

20. D.K. Schwartz, *Nature*, **362**, 593 (1993) [invited editorial]
"Pattern Formation: Instant Patterns in Thin Films"

21. R. Viswanathan, J.A.N. Zasadzinski, and D.K. Schwartz, *Science* , **261**,.449 (1993)
"Strained-Layer van der Waals Epitaxy in a Langmuir-Blodgett Film"

22. D.K. Schwartz, R. Viswanathan, J. Garnaes, J.A.N. Zasadzinski, *J. Am. Chem. Soc.*, **115**, 7374 (1993)
"Influence of Cations, Alkane Chain Length, and Substrate on Molecular Order of Langmuir-Blodgett Films"

23. D.K. Schwartz and C.M. Knobler, *J. Phys. Chem.*, **97**, 8849 (1993)
"Direct Observations of Transitions between Condensed Langmuir Monolayer Phases by Polarized Fluorescence Microscopy"

24. D.K. Schwartz, R. Viswanathan, and J.A. Zasadzinski, *Science*, **263**, 1158 (1994)
"Examining Langmuir-Blodgett Films with Atomic Force Microscopy" [technical comment]

25. D.K. Schwartz, J. Ruiz-Garcia, X. Qiu, J.V. Selinger and C.M. Knobler, *Physica A*, **204**, 606 (1994)
"Tilt Stripe Textures in Langmuir Monolayers of Fatty Acids"

26. J.A. Zasadzinski, R. Viswanathan, L. Madsen, J. Garnaes, D.K. Schwartz, *Science*, **263**, 1726 (1994)
"Langmuir-Blodgett Films"

27. R. Viswanathan, J.A.N. Zasadzinski, and D.K. Schwartz, *Nature*, **368**, 440 (1994)
"Spontaneous Chiral Symmetry-Breaking by Achiral Molecules in a Langmuir-Blodgett Film"

28. J.A. Zasadzinski, R. Viswanathan, D.K. Schwartz, J. Garnaes, L. Madsen, S. Chiruvolu, J.T. Woodward, and M.L. Longo, *Colloids and Surfaces A*, **93**, 305 (1994)
"Applications of Atomic Force Microscopy to Structural Characterization of Organic Thin Films"

29. D.K. Schwartz, R. Viswanathan, and J.A. Zasadzinski, in "Lectures on Thermodynamics and Statistical Mechanics," eds. M. Costas, R. Rodriguez, and A.L. Benavides, p. 132 (World Scientific, Singapore) 1994. "Atomic Force Microscopy of Langmuir-Blodgett Films"

30. B. Fischer, M.-W. Tsao, J. Ruiz-Garcia, T.M. Fischer, D.K. Schwartz, and C.M. Knobler, *J. Phys. Chem.*, **98**, 7430 (1994)
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31. D.K. Schwartz, R. Viswanathan, and J.A. Zasadzinski *J. Chem. Phys.*, **101**, 7161 (1994)
"Head-Tail Competition and Modulated Structures in Planar Surfactant (Langmuir-Blodgett) Films"

32. D.K. Schwartz, M.-W. Tsao and C.M. Knobler, *J. Chem. Phys.*, **101**, 8258 (1994)
"Domain morphology in a two-dimensional anisotropic mesophase: Cusps and boojum textures in a Langmuir monolayer"

33. D.K. Schwartz, C.M. Knobler, and R. Bruinsma *Phys. Rev. Lett.*, **73**, 2841 (1994)
"Direct Observation of Langmuir Monolayer Flow through a Channel"

34. S. Riviere, S. Hénon, J. Meunier, D.K. Schwartz, M.-W. Tsao and C.M. Knobler, *J. Chem. Phys.*, **101**, 10045 (1994)
"Textures and Phase Transitions in Langmuir Monolayers of Fatty Acids: A Comparative Brewster Angle Microscope and Polarized Fluorescence Microscope Study"

35. R. Viswanathan, L.L. Madsen, J.A.N. Zasadzinski, and D.K. Schwartz, *Science* , **269**, 51 (1995)
"Liquid to Hexatic to Crystalline Transition in Langmuir-Blodgett Films"

36. B. Fischer, M.-W. Tsao, J. Ruiz-Garcia, Th.M. Fischer, D.K. Schwartz, and C.M. Knobler, *Thin Solid Flims*, **284-285**, 110 (1996)
"The Blooming Transition in Langmuir Monolayers and its Microscopic Origin"

37. H.D. Sikes, J.T. Woodward IV, and D.K. Schwartz, *J. Phys. Chem.*, **100**, 9093 (1996)
"Pattern Formation in a Substrate-Induced Phase Transition during Langmuir-Blodgett Transfer"

38. J.T. Woodward, A. Ulman, and D.K. Schwartz, *Langmuir* , **12**, 3626 (1996)
"Self-Assembled Monolayer Growth of Octadecylphosphonic Acid on Mica"

39. M.L. Kurnaz, D.K. Schwartz, *J. Phys. Chem.*, **100**, 11113 (1996)
"Morphology of Micro-Phase Separation in Arachidic Acid/Cadmium Arachidate Langmuir Blodgett Multilayers"

40. J.T. Woodward, and D.K. Schwartz, *J. Am. Chem. Soc.*, **118**, 7861 (1996)
"In Situ Observation of Self-Assembled Monolayer Growth"

41. M.L. Kurnaz, D.K. Schwartz, *Langmuir* , **12**, 4971 (1996)
"Skeletonization as a Probe of Interlayer Correlations in Langmuir Blodgett Films"

42. D.K. Schwartz, *Surf. Sci. Reports*, **27**, 241-334 (1997)
"Langmuir-Blodgett Film Structure" [review]

43. M.L. Kurnaz, D.K. Schwartz, *Phys. Rev. E* **56**, 3378 (1997)
"Channel Flow in a Langmuir Monolayer: Unusual Velocity Profiles in a Liquid-Crystalline Mesophase"

44. H.D. Sikes, D.K. Schwartz, *Langmuir* **13**, 4704 (1997)
"A Temperature-Dependent Two-Dimensional Condensation Transition during Langmuir-Blodgett Deposition"

45. M.L. Kurnaz, D.K. Schwartz, *Journal of Rheology* **41**, 1173 (1997)
"A Technique for Direct Observation of Particles under Shear in a Langmuir Monolayer"

46. J.T. Woodward, I. Doudevski, H.D. Sikes, D.K. Schwartz, *J. Phys. Chem. B* **101**, 7535 (1997)
"Kinetics of Self-Assembled Monolayer Growth Explored via Submonolayer Coverage of Incomplete Films"

47. H.D. Sikes, D.K. Schwartz, *Science* **278**, 1604 (1997)
"Two Dimensional Melting of an Anisotropic Crystal Observed at the Molecular Level"

48. J.T. Woodward, D.K. Schwartz, *Langmuir* **13**, 6873 (1997)
"Dewetting Modes of Surfactant Solution as a Function of the Spreading Coefficient"

49. J.T. Woodward, D.K. Schwartz, *J. Vac. Sci. Technology B* **16**, 51 (1998)
"Removing Drift from Scanning Probe Microscope Images of Periodic Samples"

50. D.Y. Takamoto, E. TerOvanesyan, D.K. Schwartz, R. Viswanathan, *et al., Acta Physica Polonica,* **93**, 373 (1998)
"Atomic Force Microscopy of Instabilities and Reorganization of Langmuir-Blodgett Films"

51. M. Breen, J.T. Woodward, A.W. Apblett, D.K. Schwartz, *Chem. of Materials* **10**, 710 (1998)
"Direct Evidence for an Ion by Ion Deposition Mechanism in Solution Growth of CdS Thin Films"

52. D.K. Schwartz, *Current Opinion in Colloid and Interface Science* **3**, 131 (1998)
"Scanning Probe Microscope Studies of Thermodynamic and Kinetic Processes in Ultrathin Organic Films" [invited review]

53. D. Gidalevitz, M.L. Kurnaz, O.Y. Mindyuk, B.M. Ocko, D.K. Schwartz, and P.A. Heiney, *Langmuir* **14**, 2910 (1998)
"Thermal Melting in Langmuir Films of Discotic Liquid-Crystalline Compounds"

54. D. Gidalevitz, O.Y. Mindyuk, M.R. Stetzer, P.A. Heiney, M.L. Kurnaz, D.K. Schwartz, B.M. Ocko , J.P. McCauley, Jr., and A.B. Smith, III *J. Phys. Chem. B* **102**, 6688 (1998)
"A Conformational Phase Transition in a Langmuir Film of an Amphiphilic Azacrown"

55. W.A. Hayes and D.K. Schwartz *Langmuir* **14**, 5913-5917 (1998).
"Two Stage Growth of Octadecyltrimethylammonium Bromide Monolayers at Mica from Aqueous Solution Below the Krafft Point"

56. I. Doudevski, W.A. Hayes and D.K. Schwartz *Phys. Rev. Lett.* **81**, 4927 (1998)
"Submonolayer Island Nucleation and Growth Kinetics during Self-assembled Monolayer Formation"

57. C.K. Park, F.J. Schmitt, L. Evert, D.K. Schwartz, J.N. Israelachvili, C. Knobler, *Langmuir* **15**, 202-206 (1999).
"Film Balance and Fluorescence Microscopic Investigation of the Effects of Ca2+ on Mixed DMPC/DMPG Monolayers"

58. C.M. Knobler and D.K. Schwartz, *Current Opinion in Colloid and Interface Science* **4**, 46-51 (1999).
"Langmuir and Self-assembled Monolayers" [invited review]

59. I. Doudevski and D.K. Schwartz *Phys. Rev. B* **60**, 14-17 (1999).
"Dynamic scaling of the submonolayer island size distribution during self-assembled monolayer growth"

60. A. Ivanova, M.L. Kurnaz, and D.K. Schwartz, *Langmuir* **15**, 4622-4624 (1999).
"Temperature and flow rate dependence of the velocity profile during channel flow of a Langmuir monolayer"

61. D.K. Schwartz and I. Doudevski, *Mat. Res. Soc. Symp. Proc.* **570**, 163-170 (1999).
"In situ observation of scaling behavior during solution-phase growth of surfactant monolayers"

62. J.T. Woodward, H. Gwin, and D.K. Schwartz, *Langmuir* , **16**, 2957-2961 (2000)
"Contact angles on surfaces with mesoscopic chemical heterogeneity"

63. I. Doudevski, W.A. Hayes, J.T. Woodward, D.K. Schwartz, *Coll. and Surf. A* **174**, 233-243 (2000).
"Atomic force microscope imaging of molecular aggregation during self-assembled monolayer growth"

64. J. Ignes-Mullol and D.K. Schwartz, *Phys. Rev. Lett.* **85**, 1476 (2000).
"Alignment of Hexatic Langmuir Monolayers under Shear"

65. A.T. Ivanova and D.K. Schwartz, *Langmuir* **16**, 9433-9438 (2000).
"Transient Behavior of the Velocity Profile in Channel Flow of a Langmuir Monolayer"

66. I. Doudevski and D.K. Schwartz, *J. Phys. Chem. B* **104**, 9044-9047 (2000).
"Evolution of a Steady State Island Size Distribution during Self-Assembled Monolayer Dissolution"

67. I. Doudevski and D.K. Schwartz, *Langmuir* **16**, 9381-9384 (2000).
"Mechanisms of Self-Assembled Monolayer Desorption Determined using In Situ Atomic Force Microscopy"

68. R.M. Enmon Jr., K.C. O'Connor, D.J. Lacks, D.K. Schwartz, and R.S. Dotson, *Biotechnol. Bioeng.*, **72**, 579-591 (2001).
"Dynamics of Spheroid Self-Assembly in Liquid-Overlay Culture of DU 145 Human Prostate Cancer Cells"

69. I. Doudevski and D.K. Schwartz, *Appl. Surface Sci.* **175-176**, 17-26 (2001).
"Self-Assembled Monolayers in the Context of Epitaxial Film Growth"

70. C. Messerschmidt and D.K. Schwartz, *Langmuir* **17**, 462-467 (2001).
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"Mechanisms and Kinetics of Self-Assembled Monolayer Formation"

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"Microstructure Determination of AOT + Phenol Organogels Utilizing Small-Angle X-Ray Scattering and Atomic Force Microscopy"

73. J. Ignes-Mullol and D.K. Schwartz, *Nature* **410**, 348-351 (2001).
"Shear-induced Molecular Precession in a Hexatic Langmuir Monolayer."

74. I. Doudevski and D.K. Schwartz, *J. Am. Chem. Soc.* **123**, 6867-6872 (2001).
"Concentration dependence of self-assembled monolayer island nucleation and growth."

75. A.T. Ivanova, J. Ignes-Mullol, and D.K. Schwartz, *Langmuir* **17**, 3406-3411 (2001).
"Micro-rheology of a sheared Langmuir monolayer: Elastic recovery and inter-domain slippage."

76. J. Ignes-Mullol and D.K. Schwartz, *Langmuir* **17**, 3017-3029 (2001).
"Molecular Orientation in Langmuir Monolayers under Shear."

77. D.Y. Takamoto, E. Aydil, J.A. Zasadzinski , A. T. Ivanova, D.K. Schwartz, T. Yang, P.S. Cremer, *Science* **293**, 1292-1295 (2001).
"Stable ordering in Langmuir-Blodgett films"

78. D.K. Schwartz, in *Encyclopedia of Materials: Science and Technology,* K.H.J. Buschow *et al*. eds. Elsevier, Oxford (2001) pp. 4392-4399.
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79. J. Ding, H.E. Warriner, J.A. Zasadzinski, D.K. Schwartz, *Langmuir* **18**, 2800-2806 (2002).
"A Magnetic Needle Viscometer For Langmuir Monolayers"

80. R.M.Enmon Jr., K.C.O 'Connor, H. Song, D.J. Lacks, D.K. Schwartz, *Biotechnol. Bioeng.* **80**, 580-588 (2002).
"Aggregation Kinetics of Well and Poorly Differentiated Human Prostate Cancer Cells"

81. B.M. Ocko, M. Kelly, A.T. Nikova, D.K. Schwartz, *Langmuir* **18**, 9810-9815 (2002).
"Structure and phase behavior of mixed monolayers of saturated and unsaturated fatty acids"

82. B. Simmons, S. Li, V.T. John, G.L. McPherson, C. Taylor, D.K. Schwartz and K. Maskos, *Nanoletters* **2**, 1037-1042 (2002).
"Spatial compartmentalization of nanoparticles into strands of a self-assembled organogel".

83. G.B. Bantchev and D.K. Schwartz *Langmuir* **19**, 2673-2682 (2003).
"Surface rheology of β-casein layers at the air/solution interface: Formation of a two-dimensional physical gel"

84. C.E. Taylor and D.K. Schwartz, *Langmuir* **19**, 2665-2672 (2003).
"Octadecanoic acid self-assembled monolayer growth at sapphire surfaces"

85. D.M. Walba,, C.A. Liberko, E. Körblova, M. Farrow, T.E. Furtak, B.C. Chow, D.K. Schwartz, A.S. Freeman, K. Douglas, S.D. Williams, A.F. Klittnick, and N.A. Clark, *Liquid Crystals*, **31**, 481-489 (2004)
"Self-Assembled Monolayers for Liquid Crystal Alignment: Simple Preparation on Glass Using Alkyltrialkoxysilanes."

86. J.M. Mellott, W.A. Hayes, and D.K. Schwartz, *Langmuir* **20**, 2341-2348 (2004).
"Kinetics of Otcadecyltrimethylammonium Bromide Self-Assembled Monolayer Growth at Mica from Aqueous Solution"

87. J.M. Mellott and D.K. Schwartz, *J. Am. Chem. Soc.*, **126**, 9369-9373 (2004)
"Supercritical Self-Assembled Monolayer Growth"

88. G.B. Bantchev and D.K. Schwartz, *Langmuir*, **20**, 11692-11697 (2004)
"Structure of β-casein layers at the air/solution interface: Atomic Force Microscopy studies of transferred layers."

89. C.R. Vessely, J.F. Carpenter, and D.K. Schwartz, *Biomacromolecules,* **6**, 3334-3344 (2005)
"Calcium-Induced Changes to Molecular Conformation and Aggregate Structure of beta-Casein at the Air-Water Interface"

90. Mark Nelson, Nicholas Cain, Chad E. Taylor, Benjamin M. Ocko, Douglas L. Gin, Scott R. Hammond, Daniel K. Schwartz, *Langmuir* **21**, 9799-9802 (2005)
"Periodic Arrays of Interfacial Cylindrical Reverse Micelles"

91. Andrew D. Price, and Daniel K. Schwartz, *Langmuir*, **22**, 9753-9759 (2006)
"Anchoring of a Nematic Liquid Crystal on a Wettability Gradient"

92. Nicholas Cain, Josh Van Bogaert, Douglas L. Gin, Scott R. Hammond, Daniel K. Schwartz, *Langmuir* **23**, 482487 (2007)
"Self-Organization of a Wedge-Shaped Surfactant in Monolayers and Multilayers"

93. Andrew D. Price, and Daniel K. Schwartz, *J. Phys. Chem. B*, **111**, 1007-1015 (2007)
"Fatty Acid Monolayers at the Nematic/Water Interface: Phases and Liquid Crystal Alignment"

94. Keith Forward, Amanda Moster, Daniel K. Schwartz, and Daniel J. Lacks, *Langmuir,* **23**, 5255-5258 (2007)
"Contact angles of sub-millimeter particles: Connecting wettability to nanoscale surface topography"

95. Eric Karp, Cory S. Pecinovsky, Michael J. McNevin, Douglas L. Gin, and Daniel K. Schwartz, *Langmuir,* **23**, 7923-7927 (2007)
"Langmuir Monolayers of a Photo-isomerizable Macrocycle Surfactant"

96. Siwar Trabelsi, Shishan Zhang, T. Randall Lee, Daniel K. Schwartz, *Soft Matter,* **2**, 1518-1524 (2007)
"Swelling of a Cluster Phase in Langmuir Monolayers Containing Semi-Fluorinated Phosphonic Acids"

97. Siwar Trabelsi, Shishan Zhang, T. Randall Lee, Daniel K. Schwartz, *Phys. Rev. Lett.,* **100**, 037802 (2008)
"Linactants: Surfactant Analogues in Two Dimensions"

98. Andrei Honciuc, Adam Harant, and Daniel K. Schwartz, *Langmuir*, **24**, 6562-6566 (2008)
"Single-Molecule Observations of Surfactant Diffusion at the Solution-Solid Interface"

99. Andrew D. Price, and Daniel K. Schwartz, *J. Am. Chem. Soc.,* **130**, 8188-8194 (2008)
"DNA Hybridization-Induced Reorientation of Liquid Crystal Anchoring at the Nematic Liquid Crystal/Aqueous Interface"
(Highlighted in *Chemistry World*, 6/262008, "Liquid crystals stand up for DNA detection")

100. Stephanie M. Malone and Daniel K. Schwartz. *Langmuir*, **24**, 9790-9794 (2008)
"Polar and Azimuthal Alignment of a Nematic Liquid Crystal by Alkylsilane Self-Assembled Monolayers: Effects of Chain-Length and Mechanical Rubbing"

101. Shishan Zhang, Andrew C. Jamison, Daniel K. Schwartz, and T. Randall Lee, *Langmuir*, **24**, 10204-10208 (2008)
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102. Andrei Honciuc, Alexander L. Howard, Daniel K. Schwartz, *J Phys Chem C* **113**, 2078-2081 (2009)
"Single Molecule Observations of Fatty Acid Adsorption at the Silica/Water Interface: Activation Energy of Attachment"

103. Siwar Trabelsi, Shishan Zhang, Zhongcheng Zhang, T. Randall Lee, Daniel K. Schwartz, *Soft Matter* **5**, 750-758 (2009)
"Semi-fluorinated Phosphonic Acids Form Stable Nanoscale Clusters in Langmuir-Blodgett and Self-Assembled Monolayers"

104. Steve T. Marshall, Daniel K. Schwartz, J. William Medlin, *Sensors and Actuators B: Chemical* **136**, 315-319 (2009)
"Selective Acetylene Detection Through Surface Modification of Metal-Insulator-Semiconductor Sensors with Alkanethiolate Monolayers"

105. Andrei Honciuc, Denver Jn. Baptiste, Daniel K. Schwartz, *Langmuir* **25**, 4339-4342 (2009)
"Hydrophobic Interaction Microscopy: Mapping the Solid/ Liquid Interface using Amphiphilic Probe Molecules"

106. Andrei Honciuc, Daniel K. Schwartz, *J. Am. Chem. Soc.* **131**, 5973-5979 (2009)
"Probing Hydrophobic Interactions using Trajectories of Amphiphilic Molecules at a Hydrophobic/Water Interface"

107. Andrew D. Price, Jordi Ignés-Mullol, Thomas E. Furtak, Yu-an Lo, Stephanie M. Malone, and Daniel K. Schwartz, *Soft Matter,* **5**, 2252-2260 (2009)
"Liquid Crystal Anchoring Transformations Induced by Phase Transitions of a Photoisomerizable Surfactant at the Nematic/Aqueous Interface"

108. Andrei Honciuc, Denver Jn. Baptiste, Ian P. Campbell, and Daniel K. Schwartz, *Langmuir* **25**, 7389-7392 (2009)
"Solvent Dependence of the Activation Energy of Attachment determined by Single Molecule Observations of Surfactant Adsorption"

109. Siwar Trabelsi, Shishan Zhang, Zhongcheng Zhang, T. Randall Lee, Daniel K. Schwartz, *Langmuir* **25**, 8056-8061 (2009)
"Correlating Linactant Efficiency and Self-Assembly: Structural Basis of Line-Activity in Molecular Monolayers"

110. Robert Walder, Andrei Honciuc, and Daniel K. Schwartz, *Langmuir* **26** 1501-1503 (2010)
"Directed Nanobead Motion on a Gradient of Interfacial Free Energy"

111. Stephanie M. Malone, Siwar Trabelsi, Shishan Zhang, T. Randall Lee, Daniel K. Schwartz, *J. Phys. Chem. B*, **114**, 8616-8620 (2010)
"Self-assembly of Linactants: Micelles and Lyotropic Liquid Crystals in Two-Dimensions"

112. Robert Walder and Daniel K. Schwartz, *Langmuir*, **26**, 13364–13367 (2010)
"Single Molecule Observations of Multiple Protein Populations at the Oil–Water Interface"

113. Robert Walder, Andrei Honciuc, Daniel K. Schwartz, *J. Phys Chem. B*, **114**, 11484-11488 (2010)
"Phospholipid Diffusion at the Oil-Water Interface"

114. Stephen T. Marshall, Marykate O'Brien, Brittany Oetter, April Corpu, Ryan M. Richards, Daniel K. Schwartz, J. William Medlin, *Nature Materials*, **9**, 853-858 (2010)
"Controlled Selectivity for Palladium Catalysts using Self-assembled Monolayers"

115. Mark Kastantin, Blake B. Langdon, Erin L. Chang, and Daniel K. Schwartz, *J. Am. Chem. Soc.,* **133**, 4975-4983 (2011)
"Single-molecule resolution of interfacial fibrinogen behavior: Effects of oligomer populations and surface chemistry"

116. Stephen T. Marshall; Daniel K. Schwartz; J. William Medlin, *Langmuir*, **27**, 6731-6737 (2011)
"Adsorption of oxygenates on alkanethiol-functionalized Pd(111) surfaces: Mechanistic insights into the role of self-assembled monolayers on catalysis"

117. Robert Walder and Daniel K. Schwartz, *Soft Matter*, **7**, 7616-7622 (2011)
"Dynamics of Protein Aggregation at the Oil-Water Interface Characterized by Single Molecule TIRF Microscopy"

118. Robert Walder, Nathaniel Nelson, Daniel K. Schwartz, *Physical Review Letters*, **107**, 156102 (2011)
"Single Molecule Observations of Desorption-Mediated Diffusion at the Solid-Liquid Interface"
(Highlighted in Virtual Journal of Biological Physics)

119. Stephanie M. Malone and Daniel K. Schwartz, *Langmuir*, **27**, 1767-1772 (2011)
"A Macroscopic Liquid Crystal Response to Isolated DNA Helices"

120. Mark Kastantin and Daniel K. Schwartz, *ACS Nano,* **5**, 9861-9869 (2011)
"Connecting Rare DNA Conformations and Surface Dynamics using Single-Molecule Resonance Energy Transfer"

121. Robert Walder, Nathaniel Nelson, and Daniel K. Schwartz, *Nature Communications*, **2**, 515 (2011)
"Super-Resolution Surface Mapping using the Trajectories of Molecular Probes"
(Highlighted in MRS Bulletin, **37**, 105, 2012)

122. Patrick S. Noonan, Amit Shavit, Bharat R. Acharya, and Daniel K. Schwartz, *ACS Applied Materials and Interfaces*, **3**, 4374-4380 (2011)
"A Liquid Crystal Alignment Layer that Simultaneously Promotes Wetting and Homeotropic Anchoring"

123. Indira Sriram and Daniel K. Schwartz, *Surface Science Reports*, **67**, 143-159 (2012)
"Line Tension between Coexisting Phases in Monolayers and Bilayers of Amphiphilic Molecules"

124. Aaron C. McUmber, Patrick S. Noonan, and Daniel K. Schwartz, *Soft Matter,* **8**, 4335-4342 (2012)
"Surfactant-DNA Interactions at the Liquid Crystal / Aqueous Interface"

125. Mark Kastantin, Thomas F. Keller, Klaus D. Jandt, and Daniel K. Schwartz, *Advanced Functional Materials*, **22**, 2617-2623 (2012)
"Single-Molecule Tracking of Fibrinogen Dynamics on Nanostructured Poly(ethylene) Films"

126. Indira Sriram, Robert Walder, and Daniel K. Schwartz, *Soft Matter*, **8**, 6000-6003 (2012).
"Stokes-Einstein and Desorption-Mediated Diffusion of Protein Molecules at the Oil-Water Interface"

127. Robert Walder, Mark Kastantin, and Daniel K. Schwartz, *Analyst*, **137**, 2987-2996 (2012)
"High Throughput Single Molecule Tracking for Analysis of Rare Populations and Events".

128. Blake B. Langdon, Mark Kastantin, and Daniel K. Schwartz, *Biophysical Journal*, **102**, 2625-2633 (2012)
"Apparent Activation Energies Associated with Interfacial Protein Dynamics".

129. Mark Kastantin and Daniel K. Schwartz, *Microscopy and Microanalysis*, **18**, 793-797 (2012)
"Distinguishing Positional Uncertainty from True Mobility in Single-Molecule Trajectories that Exhibit Multiple Diffusive Modes"

130. Nathan Nelson, Robert Walder, and Daniel K. Schwartz, *Langmuir*, **28**, 12108-12113 (2012)
"Single Molecule Probe Dynamics on Hydrophobic Self-Assembled Monolayers"

131. Mark Kastantin, Robert Walder and Daniel K. Schwartz, *Langmuir*, **28**, 12443-12456 (2012)
"Identifying Mechanisms of Interfacial Dynamics Using Single-Molecule Tracking"

132. Jared Bee, Daniel K. Schwartz, Erwin Freund, John Carpenter, and Theodore W. Randolph, *Soft Matter*, **8**, 10329-10335 (2012)
"Production of Particles of Therapeutic Proteins at the Air-Water Interface during Compression/Dilation Cycles"

133. Keith A. Britt, Daniel K. Schwartz, Christine Wurth, Hanns-Christian Mahler, John F. Carpenter, and Theodore W. Randolph, *Journal of Pharmaceutical Sciences*, **101**, 4419-4432 (2012)
"Excipient Effects on Humanized Monoclonal Antibody Interactions with Silicone Oil Emulsion"

134. Michael Skaug and Daniel K. Schwartz, *Soft Matter*, **8**, 12017-12024 (2012)
"Using the Dynamics of Fluorescent Cations to Probe and Map Charged Surfaces"

135. Karl R. Kahsar, Daniel K. Schwartz, and J. Will Medlin, *Applied Catalysis A: General*, **445-446**, 102-106 (2012)
"Liquid- and Vapor-Phase Hydrogenation of 1-Epoxy-3-butene Using Self-Assembled Monolayer Coated Palladium and Platinum Catalysts"

136. Indira Sriram, Burapol Singhana, T. Randall Lee, and Daniel K. Schwartz, *Langmuir*, **28**, 16294-16299 (2012)
"Line Tension and Line Activity in Mixed Monolayers containing Aliphatic and Aromatic Compounds"

137. Jon H. Monserud and Daniel K. Schwartz, *Biomacromolecules*, **13**, 4002-4011 (2012)
"Effects of Molecular Size and Surface Hydrophobicity on Oligonucleotide Interfacial Dynamics"

138. Andrew C. Jamison, Shishan Zhang, Oussama Zenasni, Daniel K. Schwartz, and T. Randall Lee *Langmuir*, 28, 16834-16844 (2012)
"Fibrillar Self-organization of a Line-active Partially-fluorinated Thiol within Binary Self-assembled Monolayers"

139. Mark Kastantin and Daniel K. Schwartz, *ChemPhysChem*, **14**, 374-380 (2013).
"Identifying Multiple Populations from Single-Molecule Lifetime Distributions"

140. Mark Kastantin and Daniel K. Schwartz, *Small*, **9**, 933-941 (2013)
"DNA Hairpin Stabilization on a Hydrophobic Surface"

141. Patrick S Noonan, Richard H Roberts, Daniel K. Schwartz, *J. Am. Chem. Soc.,* **135**, 5183-5189 (2013)
"Liquid Crystal Re-orientation Induced by Aptamer Conformational Changes"
(Highlighted as a *JACS* Spotlight, doi:10.1021/ja403480m, *JACS* **135**, 5475–5476, 2013)

142. Carolyn A. Schoenbaum, Daniel K. Schwartz, and J. Will Medlin, *J. Catalysis*, **303**, 92-99 (2013)
"Controlling Surface Crowding on a Pd Catalyst with Self-Assembled Monolayers"

143. Lu Liu, Wei Qi, Daniel K. Schwartz, Theodore W. Randolph, and John F. Carpenter, *Journal of Pharmaceutical Sciences*, **102**, 2460–2470 (2013)
"The Effects of Excipients on Protein Aggregation during Agitation: An Interfacial Shear Rheology Study"

144. Michael J. Skaug, Joshua Mabry, Daniel K. Schwartz, *Physical Review Letters*, **110**, 256101 (2013)
"Intermittent Molecular Hopping at the Solid-Liquid Interface"

145. K.R. Kahsar, Daniel K. Schwartz, J. William Medlin, *ACS Catalysis*, **3**, 2041-2044 (2013)
"Selective Hydrogenation of Polyunsaturated Fatty Acids Using Alkanethiol Self-Assembled Monolayer Coated Pd/Al_2O_3 Catalysts"

146. Simon H. Pang, Carolyn A. Schoenbaum, Daniel K. Schwartz, and J. Will Medlin, *Nature Communications,* **4**, 2448 (2013); doi:10.1038/ncomms3448
"Directing Reaction Pathways by Catalyst Active-Site Selection using Self-Assembled Monolayers"

147. Nathan Nelson and Daniel K. Schwartz, *J Phys Chem Letters*, **4**, 4064–4068 (2013)
"Specific Ion (Hofmeister) Effects on Adsorption, Desorption, and Interfacial Diffusion"

148. Sean Yu McLoughlin, Mark Kastantin, Daniel K. Schwartz, and Joel L. Kaar, *Proc. Natl. Acad. Sci. U.S.A.*, **110**, 19396-19401 (2013)
"Single Molecule Resolution of Protein Structure and Interfacial Dynamics at Biomaterial Surfaces"
(Highlighted on *Phys.org*, http://phys.org/news/2013-12-price-single-molecule-microscopy-simultaneously-protein.html)
(Highlighted on *Technology.org*, http://www.technology.org/2013/12/05/two-price-one-single-molecule-microscopy-simultaneously-monitors-protein-structure-function/)

149. Michael J. Skaug, Brennan M. Coffey, and Daniel K. Schwartz, *ACS Applied Materials & Interfaces*, **5**, 12854-12859 (2013).
"Colloid Transfer Printing"

150. Michael J. Skaug, Joshua Mabry, and Daniel K. Schwartz, *JACS*, **136**, 1327-1332 (2014)
"Single-Molecule Tracking of Polymer Surface Diffusion"
(Highlighted as a *JACS* Spotlight, doi:10.1021/ja412289s, *JACS* **135**, 18237–18237, 2013)

151. Blake B. Langdon, Mark Kastantin, Robert Walder, and Daniel K. Schwartz, *Biomacromolecules,* **15,** 66-74 (2014)
"Interfacial Protein-Protein Associations"

152. Michael J. Skaug, A.M. Lacasta, L. Ramirez-Piscina, J.M. Sancho, K. Lindenberg, and Daniel K. Schwartz, *Soft Matter*, **10**, 753-759 (2014)
"Molecular Diffusion in a Mesoscale Periodic Potential at a Solid-Liquid Interface"

153. K.R. Kahsar, Daniel K. Schwartz, and J. William Medlin, *J. Am. Chem. Soc.,* **136**, 520-526 (2014)
"Control of Metal Catalyst Selectivity through Specific Non-Covalent Molecular Interactions"

154. Mark Kastantin, Blake B. Langdon, and Daniel K. Schwartz, *Advances in Colloid and Interface Science*, **207**, 240-252 (2014); doi: 10.1016/j.cis.2013.12.006
"A Bottom-Up Approach to Understanding Protein Layer Formation at Solid-Liquid Interfaces"

155. Patrick S. Noonan, Praveena Mohan, Andrew Goodwin, and Daniel K Schwartz, *Advanced Functional Materials*, doi:10.1002/adfm.201303885
"DNA Hybridization-Mediated Liposome Fusion at the Aqueous-Liquid Crystal Interface"

156. Carolyn A. Schoenbaum, Daniel K. Schwartz, and J. Will Medlin, *Accounts of Chemical Research,* **47**, 1438-1445 (2014); doi:10.1021/ar500029y
"Controlling the Surface Environment of Heterogeneous Catalysts Using Self-Assembled Monolayers"

157. Jon H. Monserud and Daniel K. Schwartz, *ACS Nano,* doi:10.1021/nn4064874
"Mechanisms of Surface-Mediated DNA Hybridization"

158. Alana Gerhardt, Nicole R. McGraw, Daniel K. Schwartz, Jared S. Bee, John F. Carpenter, Theodore W. Randolph, *Journal of Pharmaceutical Sciences*, **103**, 1601-1612 (2014); doi:10.1002/jps.23973
"Protein Aggregation and Particle Formation in Pre-filled Glass Syringes"

159. Karl R. Kahsar, Stephanie Johnson, Daniel K. Schwartz, J. Will Medlin, *Topics in Catalysis* (accepted for publication)
"Hydrogenation of cinnamaldehyde over Pd/Al_2O_3 catalysts modified with thiol monolayers"

160. Joshua N. Mabry, Michael J. Skaug, and Daniel K. Schwartz, (in review)
"Single Molecule Insights into Retention at a Reversed Phase Chromatographic Interface"

PATENTS

1. *Methods and Devices for Detecting Nucleic Acid Hybridization*, US Patent Application 2009/0061527.

2. *Method of Preparing Immunologically-Active Adjuvant-Bound Dried Vaccine Composition*, U.S. Patent Application 2010/0158951; 2013/0315966 A1.

3. *Materials and Methods for Improving Selectivity in Heterogeneous Catalysts and Products Thereof,* U.S. Patent Application 2012/023520.

4. *Methods For Determining Nucleic Acid Hybridization Using Liquid Crystal*, US Provisional Patent Application, 61467567

5. *Mixed Alkylsilane Functionalized Surfaces for Simultaneous Wetting and Homeotropic Anchoring of Liquid Crystals*, US Provisional Patent Application #61/537,943.

6. *Aptamer-Ligand Detection using Liquid Crystal,* US Provisional Patent Application, 64748529

INVITED PRESENTATIONS AT CONFERENCES

1. Scanning '92, 11/92
   "Atomic Force Microscopy of Thin Langmuir-Blodgett Films"
2. American Chemical Society National Meeting, 3/93
   "Surface Structure of Langmuir-Blodgett Films Determined by Atomic Force Microscopy"
3. Materials Research Society, 12/93
   "Frustrated Molecular Packing and Modulated Structures in Langmuir-Blodgett Films"
4. Annual Winter Meeting on Statistical Physics (Cuernavaca, Mexico), 1/94
   "Atomic Force Microscopy of Ultrathin Organic Films"
5. APS Annual March Meeting, 3/94, "Atomic Force Microscopy of Ultrathin Organic Films"
6. NATO ARW, 5/94, "Scanning Near-Field Microscopies and Molecular Materials"
   "Modulated Structures in LB Films: Surface Crystallography and Molecular Packing"
7. Harvard University, Symposium in Honor of Peter Pershan's 60th Birthday, 11/94
   "Textures, Phase Transitions, and Hydrodynamics of Langmuir Monolayers"
8. LB8–The 8th International Meeting on Organized Molecular Films, 8/97
   "Rheology of Langmuir Monolayers: Interfacial and Liquid-Crystal Influences"
9. ACS National Meeting, 8/26/98, "Growth Mechanisms of Self-assembled Monolayers"
10. Workshop: Computational Studies of Interfacial Phenomena: Nanoscale to Mesoscale
    Pacific Northwest National Laboratory, 9/25/98, "Surfactant Adsorption on Mineral Surfaces"
11. 2nd Intl. Workshop on Current Problems in Complex Fluids: Thin Interfacial Films
    Oaxaca, Mexico, 1/5/99, "Watching molecular monolayers grow on surfaces."
12. Workshop on the Flow of Surfactants at Interfaces, UC Irvine, 4/29/00
    "Coupling of Monolayer Structure to Shear: Molecular to Micrometer Length Scales."
13. 10th Intl. Conf. on Solid Films and Surfaces, Princeton Univ., 7/10/00
    "Self-assembled monolayers in the context of epitaxial film growth."
14. 75th Colloid and Surface Science Symposium, Pittsburgh, 6/10/01
    Keynote address: "How do self-assembled monolayers form?"
15. 3rd Intl. Workshop on Current Problems in Complex Fluids: Self assembling systems
    Oaxaca, Mexico, 7/11/01, "Coupling of structure to shear flow in Langmuir monolayers."
16. ACS National Meeting, Orlando, 4/10/02, "Thermodynamic Perspective on Self-assembled Monolayer Formation"
17. American Vacuum Society, Denver, 11/8/02, "A Thermodynamic Perspective on Self-Assembled Monolayer Growth"
18. American Physical Society National Meeting, Montreal, 3/04, "70 Years of Built-Up Films: Katharine Blodgett's Scientific Legacy"
19. American Chemical Society National Meeting, Anaheim, 3/31/04, "Protein Interactions at the Air-Water Interface"

20. 4th International Workshop on Complex Fluids, Merida Mexico, 1/6/05, "Self-organized Molecular Nanostructures on Surfaces"
21. Symposium in Honor of Charles M. Knobler, Los Angeles, 5/2/05, "A Thermodynamic Perspective on Self-assembled Monolayer Growth"
22. Hougen Symposium on the Frontiers of Liquid Crystals, 4/4/09, "Liquid Crystal DNA Microarrays"
23. Gordon Research Conference on Liquid Crystals, 6/18/09, "Detecting DNA Hybridization Using Changes in Liquid Crystal Anchoring"
24. Dynamics of Soft Matter Summer Workshop, Corsica, 8/2/10, "Dynamics in Insoluble Surfactant Monolayers"
25. David G. Whitten Symposium, Albuquerque, 8/19/10, "Exploiting Interactions between DNA and Liquid Crystals for Biosensing"
26. Materials Research Society National Meeting, 11/29/10, "Using Liquid Crystal Anchoring to Distinguish Single-stranded and Double-stranded DNA"
27. AIChE National Meeting, 10/29/12, Plenary Presentation, "Single Molecule Tracking at Wet Interfaces"
28. Soft-interfaces Mini-symposium - Physical Chemistry and Characterization of Soft-interfaces, Fukuoka, Japan, 3/14/13, "Single-Molecule Tracking at Soft Interfaces: Diffusion, Desorption, Aggregation, and Conformation"
29. Search and Exploration International Workshop, Cargese, Corsica, 6/5/13, "Single-Molecule Tracking at Wet Interfaces: Crawling, Flying, and Intermittent Walking"
30. Colorado Single Molecule and Membranes Meeting, 1/6/14, "Proteins at Interfaces - 1, 2, 3"
31. American Chemical Society National Meeting, Dallas, 3/18/14, "Single-molecule Resolution of Interfacial Protein Dynamics"
32. American Chemical Society National Meeting, Dallas, August 2014, "Mapping surface heterogeneity with accumulated molecular trajectories"

CONFERENCE ORGANIZING AND SESSIONS CHAIRED

1. Session chair: APS Annual March Meeting, 3/1994, "Organic Films and Monolayers"
2. Co-organizer, ACS national meeting, Fall 1997, “Molecular Organization in Self-Assembly”
3. Co-organizer, Workshop on the Flow of Surfactants at Interfaces, UC Irvine, 4/29/2000
4. Organizer, ACS National meeting, Spring 2002, “Colloid or Surface Chemistry Award Symposium Honoring Charles Knobler,”
5. Co-organizer, AIChE National meeting, Spring 2002, “Prediction and Correlation of Transport Properties.”
6. Organizer, 4th International Workshop on Complex Fluids, January 2005, Merida, Mexico
7. Co-Chair, 80th ACS Colloid and Surface Science Symposium, June 2006, Boulder, CO
8. Co-organizer, ACS national meeting, March 2014, “Single Molecules at Interfaces: Experiments and Simulations”

INVITED LECTURES AND SEMINARS

1. AT&T Bell Laboratories, 5/93
2. Exxon Research Laboratories, 11/93
3. Princeton University, Dept. of Physics, 11/93
4. Tulane University, Department of Chemical Engineering, 3/95
5. University of Texas–Austin, Dept. of Chemistry, 11/96
6. Loyola University, Dept. of Chemistry, 3/97
7. Stanford University, Depts. of Chemistry and Chemical Engineering, 10/8/97
8. University of Virginia, Dept. of Chemistry, 1/23/98
9. Auburn University, Dept. of Chemistry, 4/22/98
10. University of Georgia, Dept. of Chemistry, 4/23/98
11. National Institute of Standards and Technology, 6/5/98
12. University of New Orleans, Dept. of Chemistry, 9/18/98
13. University of Illinois at Urbana-Champaign, Dept. of Chemistry, 10/9/98
14. Harvard University, Dept. of Applied Physics, 11/6/98
15. Emory University, Dept. of Physics, 9/10/99
16. Cornell University, Dept. of Chemistry, 12/13/99
17. Stanford University, Dept. of Chemical Engineering, 1/25/00
18. UC Berkeley, Dept. of Chemical Engineering, 1/26/00
19. University of Delaware, Dept. of Chemical Engineering, 2/15/00
20. University of Colorado, Boulder, Dept. of Chemical Engineering, 3/9/00
21. University of Colorado, Boulder, Dept. of Chemistry, 4/8/00
22. University of Florida, Gainesville, Dept. of Chemical Engineering, 9/11/00
23. Colorado State University, Dept. of Chemical Engineering, 4/13/01
24. University of California, Los Angeles, Dept. of Chemistry, 10/8/01
25. Sandia National Lab (Livermore, CA), Microelectronics Seminar 11/13/02
26. Brookhaven National Lab, Dept. of Chemistry, 11/27/02
27. Colorado School of Mines, Dept. of Chemical Engineering, 2/28/03
28. Cornell University, Dept. of Chemical Engineering, 11/3/03
29. Northwestern University, Depart of Physics Colloquium, 5/27/05
30. Case-Western Reserve University, Dept. of Chemical Engineering, 11/16/05
31. University of California, Santa Barbara, Dept. of Chemical Engineering, 11/2/2006
32. School of Pharmacy, University of Colorado Health Sciences Center, 1/25/2007
33. Department of Chemistry, University of Miami, 10/24/08
34. PittCon Lectures, Department of Chemistry, Duquesne University, 11/20/08
35. Department of Chemistry, Lehigh University, 2/4/2010
36. Department of Chemistry, University of Kentucky, 4/9/2010
37. Department of Chemical Engineering, Rice University, 2/17/2011
38. Department of Chemical Engineering, Tulane University, 11/11/2011
39. Center for Integrated Nanotechnologies, Sandia National Lab, 12/12/2011
40. Department of Physical Chemistry, University of Barcelona, 7/5/12
41. Pall Corporation, 8/9/12
42. Millipore Corporation, 12/12/12
43. Department of Chemical Engineering, Johns Hopkins University, 2/14/13
44. Department of Chemistry, University of Akron, 2/20/13
45. Department of Chemistry, University of Massachusetts Amherst, 9/19/13

INVITED LECTURES AND SEMINARS (continued)

46. Department of Chemical Engineering, Arizona State University, 9/30/13
47. Department of Chemical Engineering, Georgia Tech University, 10/9/13
48. Department of Chemical Engineering, University of Michigan, 12/3/13
49. Department of Chemical Engineering, Northeastern University, 4/2/14
50. Department of Chemical Engineering, University of Buffalo, 9/26/14 (planned)

COURSES TAUGHT

University of Colorado

CHEN 1211 – General Chemistry for Engineers, S01, S03, S04, F05, S07

CHEN 1000 – Creative Technology, F01, S02, F06, S08, S09, F10

CHEN 4130 – Chemical Engineering Lab 2, F03, F04, F05

CHEN 5370 – Intermediate (Graduate) Thermodynamics, F07, F09, F10

CHEN 4838/5835 – Colloids and Interfaces, F04, S10, F11

Tulane University

Introduction to Quantum Chemistry (graduate level), F94, F95, F96

Physical Chemistry of Surfaces, S95, S99

General Chemistry I (Honors), F00

General Chemistry II, S96, S00

Physical Chemistry II – Thermodynamics, S97

Physical Chemistry I – Quantum Chemistry, F97, F98

PERSONNEL DIRECTED

Name	**Dates**	**Current position**
Graduate students		
Ivo Doudevski	1995-2000 (Ph.D. 12/00)	NYU Langone Medical Center
Ani Ivanova	1996-2000 (Ph.D. 12/00)	Cabot Corp.
Grigor Bantchev	1996-2003 (Ph.D. 5/03)	Staff Scientist, USDA
James Mellott	1998-2004 (Ph.D. 4/04)	Patent Attorney
Andrew Price	2003-2007 (Ph.D. 9/07)	Senior Scientific, LLC
Nicholas Cain	2003–2004	Qimonda
Stephanie Malone	2007 – 2011 (Ph.D. 12/11)	Carnegie Mellon (postdoc)
Keith Britt*	2010–2011 (M.S. 1/11)	Amgen
Daniel Kienle	2011 (M.S. 5/11)	UC Davis PhD student
Patrick Noonan	2010 – 2013 (Ph.D. 12/13)	
Carolyn Schoenbaum*	2010 – 2014 (Ph.D. 5/14)	Intel
Rudy Kahsar*	2011 – 2014 (Ph.D. 5/14)	
Nathan Nelson	2010 –	
Blake Langdon	2010 –	
Aaron McUmber	2010 –	
Jon Monserud	2010 –	
Joshua Mabry	2011 –	
Kate Macri	2013 –	
Huai-Ying (Heidi) Chin	2014 –	
Xun (Chauncy) Yin	2014 –	
Pengxiao Hao*	2014 –	
Lucas Ellis*	2014 –	
James Weltz*	2014 –	

* co-advised

PERSONNEL DIRECTED (continued)

Postdoctoral fellows

John Woodward	1994-97	NIST Gaithersburg
M. Levent Kurnaz	1995-97	Bogazici University, Turkey
William Hayes	1997-98	PMC/Biogenix
Jordi Ignés-Mullol	1998-2000	University of Barcelona
Christian Messerschmidt	2000	Texas Instruments (Munich)
Chad Taylor	1999-2001	Komag Corp.
Chad Braun	2004-2005	Array BioPharma
Adam Harant	2004-2006	Micron Corp.
Xiaoling Li	2006-2007	
Siwar Trabelsi	2006-2009	University of Paris
Andrei Honciuc	2006-2009	Zurich Univ. of Appl. Sci.
Robert Walder	2008–2012	NIST (NRC Fellow)
Indira Sriram	2010–2013	NIST (NRC Fellow)
Mark Kastantin	2009–2013	
Xiang Wang	2012–2013	
Michael Skaug	2011–	
Shaonti Chakraborty	2013–	
Dapeng Wang	2013–	
Patrick Noonan	2014–	

PERSONNEL DIRECTED (continued)

Name	**Dates**	**Position at the time**
Undergraduate students		
Hadley Sikes	1994-97 (Sr. Thesis)	Tulane undergrad
Deborah Simon	1996-97	Tulane undergrad
Timothy Kerwin	1997-98	Tulane undergrad
Holly Gwin	1998-99	Tulane undergrad
Roman Raju	1999	Tulane undergrad
Adam Freeman	Summer 2001	Univ of Florida undergrad
Mark Nelson	Summer 2002	CU undergrad
Eszther Horanyi	Fall 2002	CU undergrad
Josh van Bogaert	Summer 2003	Vanderbilt undergrad
Ana Oquendo	Summer 2004	Univ. of Puerto Rico undergrad
David Hutson	Fall 2004	CU undergrad
Keith Beers	Fall 2004	CU undergrad
Robert Mattson	Summer 2005	UT-Austin undergrad
Eric Karp	2006-2007 (Sr. Thesis)	CU undergrad
Ami Patel	Spring 2007	CU undergrad
Alex Howard	Summer 2008	CU undergrad
Denver Jn. Baptiste	Summer 2008	CUNY undergrad
Kevin Daly	Summer 2008	Rice undergrad
Erin Chang	Summer 2009	UPenn undergrad
Amit Shavit	Summer 2009	UMass undergrad
Chris Marbury	Fall 2009	CU Undergrad
Florencia Paredes	Summer 2010	Cornell undergrad
Cherrelle Thomas	Summer 2011	Howard Univ. undergrad
Richard (Rusty) Roberts	Summer 2012	Whitman College undergrad
Brennan Coffey	Fall 2012-	CU Undergrad
Roya Mirhossaini	Spring 2013-	CU Undergrad
Nora Schweitz	Fall 2013-	CU Undergrad
Alan Bromwell	Fall 2013-	CU Undergrad
Other		
Rich Fox	Summer 2002	Science teacher, Las Vegas, NV